

NOV 24 2000

TECH CENTER 1600/2300

11 no resonance Raman spectra that interfere with the resonance Raman spectra of said  
12 microorganism; and

13 (c) comparing said induced spectrum of step (b) with said characteristic  
14 spectrum to detect the presence of said microorganism in said sample, the sample having at least  
15 200 fold antibodies[y molecules] in excess of target antigen.

1 12. (Amended) A system for the detecting the presence of a specific  
2 microorganism in a sample, said microorganism having a characteristic resonance enhanced  
3 Raman backscattered energy spectrum produced by irradiating nucleic acids in said  
4 microorganisms at a wavelength between 242-257 nm, comprising:

5 (a) means for contacting said sample with a medium comprising solid phase  
6 immobilized antibodies which specifically bind to a characteristic cell surface antigen on said  
7 microorganism to form an antigen-antibody complex, thereby immobilizing said microorganism  
8 on said solid phase, said antibodies emitting essentially no resonance Raman spectra that  
9 interfere with the resonance Raman spectra of said microorganism when irradiated with a laser  
10 light of 242-257 nm;

11 (b) means for irradiating the solid phase of step (a) with a laser light of 242-  
12 257 nm to produce a resonance enhanced Raman backscattered energy spectrum; and

13 (c) means for comparing said induced spectrum of step (b) with said  
14 characteristic spectrum to detect the presence of said microorganism in said sample.